

CLAIMS

1. A method for scrambling information bits in a communications system, the apparatus comprising:

determining a scrambling sequence in accordance with a metric of system time; and
scrambling information bits with the scrambling sequence.

2. The method as claimed in claim 1, wherein said determining a scrambling sequence in accordance with a metric of system time comprises:

determining the metric in accordance with a subinterval of a system time interval in which the information bits are to be transmitted; and
determining the scrambling sequence in accordance with the metric.

3. The method of claim 2, wherein said determining the metric in accordance with a subinterval of a system time interval in which the information bits are to be transmitted comprises:

determining the metric in accordance with a first subinterval of the system time interval.

4. The method of claim 2, wherein said determining the scrambling sequence in accordance with a metric of system time comprises:

performing mapping of the metric on the scrambling sequence.

5. The method of claim 1, wherein said scrambling information bits with the scrambling sequence comprises:

performing an exclusive-OR of the information bits with the scrambling sequence.

6. A method for unscrambling information bits in a communications system, the apparatus comprising:

determining an unscrambling sequence in accordance with a metric of system time; and
unscrambling information bits with the unscrambling sequence.

7. The method as claimed in claim 6, wherein said determining an unscrambling sequence in accordance with a metric of system time comprises:

determining the metric in accordance with a first subinterval of a system time interval preceding a second subinterval of the system time interval by a pre-determined number of subintervals, wherein the second subinterval comprises information bits to be unscrambled; and

determining the unscrambling sequence in accordance with the metric.

8. The method as claimed in claim 7, wherein said determining the metric in accordance with a first subinterval of the system time interval preceding a second subinterval of system time interval by a pre-determined number of subintervals comprises:

determining the first subinterval of the system time interval preceding the second subinterval of the system time interval by one subinterval.

9. The method as claimed in claim 7, wherein said determining the unscrambling sequence in accordance with the metric comprises:

performing mapping of the metric on the unscrambling sequence.

10. The method of claim 6, wherein said unscrambling information bits with the scrambling sequence comprises:

performing and exclusive-OR of the information bits with the unscrambling sequence.

11. A method for communicating information bits from a first terminal to a second terminal in a communications system, the apparatus comprising:

determining a scrambling sequence in accordance with a metric of system time at the first terminal;

scrambling information bits with the scrambling sequence at the first terminal;

determining an unscrambling sequence in accordance with the metric of system time at the second terminal; and

unscrambling received information bits with the unscrambling sequence at the second terminal.

12. A method for generating scrambling sequence in a communications system, the apparatus comprising:

determining a metric of system time; and

determining the scrambling sequence in accordance with the metric of system time.

13. The method of claim 12, wherein said determining a metric of system time comprises:

determining the metric in accordance with a subinterval of a system time interval in which information bits are to be transmitted.

14. The method of claim 13, wherein said determining the metric in accordance with a subinterval of a system time interval in which information bits are to be transmitted comprises:

determining the metric in accordance with a first subinterval of the system time interval.

15. The method of claim 12, wherein said determining the scrambling sequence in accordance with the metric of system time comprises:

performing mapping of the metric on the scrambling sequence.

16. A method for generating unscrambling sequence in a communications system, the apparatus comprising:

determining a metric of system time; and

determining the unscrambling sequence in accordance with the metric of system time.

17. The method of claim 16, wherein said determining a metric of system time comprises:

determining the metric in accordance with a first subinterval of a system time interval preceding a second subinterval of the system time interval by a pre-determined number of subintervals, wherein the second subinterval comprises information bits to be unscrambled; and

determining a scrambling sequence in accordance with the metric.

18. The method of claim 17, wherein said determining the metric in accordance with a first subinterval of a system time interval preceding a second subinterval of the system time interval by a pre-determined number of subintervals comprises:

determining the metric in accordance with a first subinterval of a system time interval preceding a second subinterval of the system time interval by one subinterval.

19. The method of claim 16, wherein said determining the unscrambling sequence in accordance with the metric of system time comprises:

performing mapping of the metric on the unscrambling sequence.

20. An apparatus for scrambling information bits in a communications system, the apparatus comprising:

means for determining a scrambling sequence in accordance with a metric of system time; and

means for scrambling information bits with the scrambling sequence.

21. The apparatus as claimed in claim 20, wherein said means for determining a scrambling sequence in accordance with a metric of system time comprises:

means for determining the metric in accordance with a subinterval of a system time interval in which the information bits are to be transmitted; and

means for determining the scrambling sequence in accordance with the metric.

22. The apparatus of claim 21, wherein said means for determining the metric in accordance with a subinterval of a system time interval in which the information bits are to be transmitted comprises:

means for determining the metric in accordance with a first subinterval of the system time interval.

23. The apparatus of claim 21, wherein said means for determining the scrambling sequence in accordance with a metric of system time comprises:

means for performing mapping of the metric on the scrambling sequence.

24. The apparatus of claim 20, wherein said means for scrambling information bits with the scrambling sequence comprises:

means for performing an exclusive-OR of the information bits with the scrambling sequence.

25. An apparatus for unscrambling information bits in a communications system, the apparatus comprising:

means for determining an unscrambling sequence in accordance with a metric of system time; and

means for unscrambling information bits with the unscrambling sequence.

26. The apparatus as claimed in claim 25, wherein said means for determining an unscrambling sequence in accordance with a metric of system time comprises:

means for determining the metric in accordance with a first subinterval of a system time interval preceding a second subinterval of the system time interval by a pre-determined number of subintervals, wherein the second subinterval comprises information bits to be unscrambled; and

means for determining the unscrambling sequence in accordance with the metric.

27. The apparatus as claimed in claim 26, wherein said means for determining the metric in accordance with a first subinterval of the system time interval preceding a second subinterval of system time interval by a pre-determined number of subintervals comprises:

means for determining the first subinterval of the system time interval preceding the second subinterval of the system time interval by one subinterval.

28. The apparatus as claimed in claim 26, wherein said means for determining the unscrambling sequence in accordance with the metric comprises:

means for performing mapping of the metric on the unscrambling sequence.

29. The apparatus of claim 25, wherein said means for unscrambling information bits with the scrambling sequence comprises:

means for performing an exclusive-OR of the information bits with the unscrambling sequence.

30. An apparatus for communicating information bits from a first terminal to a second terminal in a communications system, the apparatus comprising:

means for determining a scrambling sequence in accordance with a metric of system time at the first terminal;

scrambling information bits with the scrambling sequence at the first terminal;

means for determining an unscrambling sequence in accordance with the metric of system time at the second terminal; and

means for unscrambling received information bits with the unscrambling sequence at the second terminal.

31. An apparatus for generating scrambling sequence in a communications system, the apparatus comprising:

means for determining a metric of system time; and

means for determining the scrambling sequence in accordance with the metric of system time.

32. The apparatus of claim 31, wherein said means for determining a metric of system time comprises:

means for determining the metric in accordance with a subinterval of a system time interval in which information bits are to be transmitted.

33. The apparatus of claim 32, wherein said means for determining the metric in accordance with a subinterval of a system time interval in which information bits are to be transmitted comprises:

means for determining the metric in accordance with a first subinterval of the system time interval.

34. The apparatus of claim 31, wherein said means for determining the scrambling sequence in accordance with the metric of system time comprises:

means for performing mapping of the metric on the scrambling sequence.

35. An apparatus for generating unscrambling sequence in a communications system, the apparatus comprising:

means for determining a metric of system time; and

means for determining the unscrambling sequence in accordance with the metric of system time.

36. The apparatus of claim 35, wherein said means for determining a metric of system time comprises:

means for determining the metric in accordance with a first subinterval of a system time interval preceding a second subinterval of the system time interval by a pre-determined number of subintervals, wherein the second subinterval comprises information bits to be unscrambled; and

means for determining a scrambling sequence in accordance with the metric.

37. The apparatus of claim 36, wherein said means for determining the metric in accordance with a first subinterval of a system time interval preceding a second subinterval of the system time interval by a pre-determined number of subintervals comprises:

means for determining the metric in accordance with a first subinterval of a system time interval preceding a second subinterval of the system time interval by one subinterval.

38. The apparatus of claim 35, wherein said means for determining the unscrambling sequence in accordance with the metric of system time comprises:

means for performing mapping of the metric on the unscrambling sequence.